

Code No: R204135M

R20

Set No. 1

IV B.Tech I Semester Regular Examinations, January – 2024

GROUND WATER HYDROLOGY WELLS AND PUMPS

(OE-III: CE, EEE, ME, ECE, CSE, IT, AME, MM, CSE-AIML, CSE-AI, CSE-DS, CSE-AIDS, CSE-CS, CSE-IOTCSIBCT, CSE- IOT, FE, AIDS, PHARM, CS, AIML & CSD)

Time: 3 hours

Max. Marks: 70

***Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks***

UNIT - I

- 1 a) Write about water resources status of India. [7]
b) What is aquifer? Explain about different types of aquifer. [7]
(OR)
- 2 a) Write the occurrence of water resources. [7]
b) Explain the ground water movement in the soil. [7]

UNIT - II

- 3 a) Write about classification of different wells. [7]
b) Write about design of open wells. [7]
(OR)
- 4 a) Elucidate about development of well system. [7]
b) Write about difficulties in drilling. [7]

UNIT - III

- 5 a) Derive the equation for confined aquifer in un steady state condition. [7]
b) Explain about well interference. [7]
(OR)
- 6 a) Describe about aquifer properties influencing the yield. [7]
b) Write a short note on hydraulic resistance and permeability. [7]

UNIT - IV

- 7 a) Write about surface ground water exploitation techniques. [7]
b) Explain about high head water lifting devices. [7]
(OR)
- 8 a) Describe in detail about classification of indigenous pumps. [7]
b) Write about wind powered water lifting. [7]

UNIT - V

- 9 a) Explain the working of volute type of centrifugal pump with a neat sketch. [7]
b) Write about submersible pumps in detail. [7]
(OR)
- 10 a) Explain about priming. [7]
b) Describe about mixed flow pumps. [7]